State of California
Department of Fish and Wildlife

your Pour

Governor's Office of Planning & Research

Aug 23 2022

STATE CLEARING HOUSE

Memorandum

Date: August 22, 2022

3 ,

то: Robert Trang

Manager, WPPM Delta Planning Section California Department of Water Resources Division of Operations and Maintenance 1516 9th Street 2nd Floor Sacramento, CA 95814

Sacramento, CA 95814 wfrdsb_ceqa@water.ca.gov

--- DocuSigned by:

Erin Chappell

From: Erin Chappell, Regional Manager

California Department of Fish and Wildlife-Bay Delta Region, 2825 Cordelia Road, Suite 100, Fairfield CA 94534

Subject: West False River Drought Salinity Barrier Project, Draft Environmental Impact Report, SCH No. 2022020528, Contra Costa County

The California Department of Fish and Wildlife (CDFW) has reviewed the Draft Environmental Impact Report (DEIR) prepared by the California Department of Water Resources (DWR) Division of Operations and Maintenance for the West False River Drought Salinity Barrier (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines. CDFW previously submitted comments in response to the Notice of Preparation of the DEIR.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority. (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: DWR Division of Operations and Maintenance

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Robert Trang 2 August 22, 2022 California Department of Water Resources

Objective: The objectives of the Project are: (1) install a drought salinity barrier to protect water quality in the Central and South Sacramento-San Joaquin Delta (Delta), based on need demonstrated by drought conditions and low upstream reservoir storage; (2) install a drought salinity barrier in the Central or South Delta up to two times over 10 years, including consecutive years, should a drought occur during the period from 2023 to 2032; and (3) minimize the impacts of salinity intrusion on the beneficial uses of interior Delta water during persistent drought conditions through the installation of a drought salinity barrier in the Central or South Delta. Primary Project activities include construction and removal of an approximately 800-foot-long barrier consisting of approximately 84,000 cubic yards of18-inch minus embankment rock extending from the Jersey Island levee on the south side of West False River to the Bradford Island levee on the north side twice within a 10-year period, potential notching of the barrier, and installation of water quality monitoring stations.

Location: The Project is located on West False River approximately 0.4 mile east of its confluence with the San Joaquin River, in Contra Costa County, California, between Jersey and Bradford islands. This location is approximately 4.8 miles northeast of the City of Oakley; Latitude 38.057057 N, Longitude 121.670432 W; Assessor's Parcel Number 027-010-005-0.

Timeframe: April 1, 2023 to November 30, 2032

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist DWR Division of Operation and Maintenance in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document. Based on the Project's avoidance of significant impacts on biological resources with implementation of mitigation measures, including those CDFW recommends in Attachment A, CDFW concludes that an Environmental Impact Report is appropriate for the Project.

I. Project Description and Related Impact Shortcoming

Would the Project interfere substantially with movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede use of native wildlife nursery sites?

COMMENT 1: Chapter 2 Project Description

Issue: The DEIR does not provide adequate information to show that impacts to migrating salmonids and sturgeon would be less-than-significant. The Project has the potential to delay migration of these species, require fish to find alternate routes, and/or create habitat for non-native predatory species, all of which could increase mortality.

Specific impact: Constructing the Project would interfere with the movement of native resident and migratory fish species.

Why impact would occur: The Project would construct a complete rock barrier that would span the entire width of West False River.

Evidence impact would be significant: The presence of the Project within West False River coincides with the peak migration period for multiple migratory salmonid species. The DEIR identifies that Central Valley spring-run Chinook salmon leave the ocean to begin their upstream migration in late January and early February and enter the Sacramento River between March and September, primarily in May and June; peak adult steelhead upstream migration on the Sacramento River occurs from August through November; and Central Valley fall-/lake-gall-run Chinook salmon enter the Sacramento River system from mid-September through January.

Robert Trang 3 August 22, 2022 California Department of Water Resources

Recommendation 1: CDFW recommends changing Project impacts to migrating salmonids and sturgeon from less-than-significant to potentially significant and include mitigation measures to reduce impacts to less-than-significant.

Recommended Potentially Feasible Mitigation Measure Mitigation Measure 1: To reduce impacts to less-than-significant the barrier will be designed to allow for fish passage at all times.

Recommended Potentially Feasible Mitigation Measure Mitigation Measure 2: To reduce impacts to less-than-significant, the Project shall conduct monitoring to identify impacts to fisheries resources. DWR shall have acoustic monitoring devices installed around upstream and downstream of the barrier. DWR shall also conduct monitoring and electrofishing monitoring by replicating the sample locations and methods used in the Young et al. 2018 study. Monitoring shall be conducted one year prior to barrier installation, during barrier installation, and one year after barrier removal. Any impacts to migratory fishery resources shall be mitigated by removing an anadromous fish passage barrier within the Delta.

COMMENT 2: Chapter 2 Project Description

Issue: The DEIR identifies that a notch in the middle portion of the barrier in early January of the second year of installation and refilling of the notch as early as the first week of April could be created to allow for fish passage; however, the DEIR goes on to identify that no notch would be constructed if an evaluation of collected data indicates that special-status aquatic species are not using West False River as a migratory pathway.

Specific impact: The movement of native resident or migratory of fish is not restricted to special-status aquatic species and the decision to not provide for fish passage should not be restricted to special-status aquatic species.

Why impact would occur: The Project would not construct a notch from January to April if it is identified that special-status aquatic species are not using West False River as a migratory pathway.

Evidence impact would be significant: Multiple native non-special-status aquatic species, including but not limited to white sturgeon, shad, Sacramento sucker, could use West False River and movement would be restricted by the Project.

Recommended Potentially Feasible Mitigation Measure Mitigation Measure 3: To reduce impacts to less-than-significant, the notch or other fish passage structure should be installed to provide for fish passage from January to April.

II. Mitigation Measure or Alternative and Related Impact Shortcoming

COMMENT 3: Chapter 6 Alternatives

Issue: Constructing salinity barriers in drought years is a short-term solution to a predictably long-term problem. Drought is a known recurring phenomenon in California. The alternatives analyzed in the DEIR are extremely limited in that they are restricted to use of in-water barriers during drought conditions over the course of the next 10-years. However, there are reasonably feasible alternatives not analyzed in the DEIR that would substantially reduce the environmental impacts of the Project than is currently proposed.

One alternative is the the Franks Tract Futures Project (https://wildlife.ca.gov/Conservation/Watersheds/Franks-Tract) which could reduce a large proportion of the significant biological impacts identified in the DEIR to a level of less-than-significant while meeting Project objectives. The Franks Tract Futures Project is a one-time project designed to prevent salinity intrusion into the Central and South Delta. Unlike the alternatives analyzed in the DEIR, this alternative would not result in the significant and unavoidable negative impacts to water quality in miles of rivers and streams under adverse drought conditions that impede ongoing

Robert Trang 4 August 22, 2022 California Department of Water Resources

recovery efforts of CESA-listed fish populations in the Delta. Also, the Franks Tract Futures Project would create habitat for special-status fish species (e.g., Delta smelt). While this alternative may have increased construction impacts in the short-term, in the long-term it could eliminate the need for the Project and the other rock barriers DWR installs or plans to install in the Delta that can have devastating effects to the Delta's fisheries resources.

Another alternative would be to construct a desalination plant at Clifton Court Forebay for use during persistent drought to treat water delivered to State Water Project contractors. A desalination plant would also decrease the need for reservoir releases to combat saltwater intrusion into the Central and South Delta and instead allow water to be stored in the reservoir until needed for special-status fish species flow requirements. CDFW acknowledges that desalination plants have impacts to biological resources; however, a desalination plant could prevent the need for DWR to continually install drought-year salinity barriers in the Delta and prevent water quality impacts, special-status fish habitat impacts, and establishment of non-native aquatic species, which was observed during the 2015 (Kimmerer et al. 2019) and 2021 installation of the West False River drought salinity barrier.

Both, the Franks Tract Futures Project, and a desalination plant at Clifton Court Forebay are one-time construction projects that have the potential to decrease impacts to special-status species habitat when compared to over time to the reoccurring construction, operation and removal impacts associated with the Project as currently proposed.

Recommendation 2: CDFW recommends that the DEIR include non-drought year salinity barrier alternatives to protect water quality in the Central and/or South Delta. Specifically, CDFW recommends including the Franks Tract Futures Project, a possible desalination plant at Clifton Court Forebay, or a combination of the two as Project alternatives that should be analyzed within a revised DEIR.

COMMENT 4: Section 3.3 Biological Resources

Issue: The DEIR does not discuss temperature, pH, and dissolved oxygen effects of the Project.

Specific impact: Temperature, pH, and dissolved oxygen effects associated with the Project could substantially impact species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the U.S. Fish and Wildlife Service (USFWS).

Why impact would occur: The Project is located within West False River and is designed to restrict flow and prevent salinity intrusion into the interior Delta. Restricting river flow has the potential to alter water temperature which could alter habitat and impact species identified as a candidate, sensitive, or species-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

In 2021, when the West False drought barrier was installed, pH exceeded water quality objectives locally at Frank's Tract that is a cause of concern for ammonia toxicity to fish (Hartman et al. 2022).

Evidence impact would be significant: Water impediments can alter water properties including temperature, pH, and dissolved oxygen levels. As flow rates are reduced, water temperature increases and can impact salmonids by deducing growth rates, increase predation risk, and increase susceptibility to disease (Moore and Townsend 1998, Marine and Cech, Jr. 2004). When water temperatures increase, they hold less dissolved oxygen and increase in pH; reduction in dissolved oxygen can decrease survival of juvenile salmonids (Selong et al. 2001, Martins et al. 2011). When pH levels exceed water quality standards, ammonium (non-toxic form) shift to ammonia (toxic form) and can negatively impact fish and potentially other aquatic life. Additionally, ammonium can shift the form of carbon, which has unknown effects on local conditions.

California Department of Water Resources

Recommended Potentially Feasible Mitigation Measure Mitigation Measure 4: To reduce impacts to less-than-significant, the DEIR should identify temperature, pH, and dissolved oxygen effects associated with the Project, and identify minimization and mitigation measures to reduce any significant impacts to less-than-significant. For temperature analysis, CDFW recommends conducting a temperature analysis (using existing DSM2 Hydro results) downstream and upstream of the barrier, including all areas that may be affected by the barriers, to understand changes to temperatures and any exceedance of stress and lethal temperatures over baseline for Delta smelt (22°C) (Lewis et al. 2001 and Bennett 2005), adult Chinook salmon (21.1°C) (Lindley 2004), juvenile Chinook salmon (24°C) (Poletto et al. 2017).

COMMENT 5: Section 3.3 Biological Resource; Compensatory Mitigation

Issue: The DEIR does not adequately mitigate for Project impacts to the following aquatic special-status species: Delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), and winter- and spring-run chinook salmon (*Oncorhynchus tshawytscha*).

Specific impact: The DEIR identifies that the Project consists of temporary impacts and will mitigate for impacts at a 1:1 ratio at a mitigation bank, preservation of land, or other means after consultation with CDFW. However, CDFW identifies temporary impacts as impacts that last for less than one year with restoration. The DEIR also identifies that the Project has indirect and indict impacts; however, the 1:1 ratio mitigation proposal only mitigates for the Project's direct impacts of 2.75 acres.

Why impact would occur: If the Project is installed from April through November of the next year, Project impacts would be longer than one year and consider permanent impacts instead of temporary impacts. Also, the proposed 1:1 ratio does not mitigate for indirect impacts associated with the Project, such as predation, establishment of aquatic non-native species, etc.

Evidence impact would be significant: Consistent with CEQA Guidelines, Section 15380, the status of the Delta smelt as endangered, longfin smelt as threatened, winter-run chinook salmon as endangered, and spring-run chinook salmon as a threatened species under CESA (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA.

Recommended Potentially Feasible Mitigation Measure 5: To reduce impacts to less-than-significant, CDFW recommends that the DEIR evaluate the barrier's zone of influence and calculate the area of impact. Impacts should be based on where temperature, water velocity, and other water quality parameters (dissolved oxygen, pH, harmful algal blooms, etc.) negatively impact or cause habitat to be inhabitable to special-status species. The entire area of impacts should then be mitigated at a 1:1 ratio.

COMMENT 6: Section 3.3 Biological Resources; Swainson's Hawk

Issue: The DEIR does not adequately minimize Project impacts to Swainson's hawk (*Buteo swainsoni*).

Specific impact: Mitigation Measure BIO-5 does not require consultation with CDFW if an active Swainson's hawk nest is present within 0.5 mile of the Project site.

Why impact would occur: As written in the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000), if an active nesting is identified within the 0.5-mile radius, consultation with CDFW is required.

Evidence impact would be significant: Consistent with CEQA Guidelines, Section 15380, the status of the Swainson's hawk as a threatened species under CESA

(Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA.

The estimated historical population of Swainson's hawk was nearly 17,000 pairs; however, in the late 20th century, Bloom (1980) estimated a population of only 375 pairs. The decline was primarily a result of habitat loss from development (CDFW 2016). The 2009 surveys estimated the population at 941 breeding pairs. The species is currently threatened by loss of nesting and foraging habitat (e.g., from agricultural shifts to less crops that provide less suitable habitat), urban development, environmental contaminants (e.g., pesticides), and climate change (CDFW 2016).

Recommended Potentially Feasible Mitigation Measure 6: To reduce impacts to less-than-significant, if an active Swainson's hawk nest is present within 0.5 miles of the Project site, Project activities will not occur within 0.5 miles of an active Swainson's hawk nest until CDFW is consulted and the Project complies with CESA.

COMMENT 7: Section 3.3 Biological Resources; Burrowing Owls

Issue: The DEIR does not adequately minimize Project impacts to burrowing owls (*Athene cunicularia*).

Specific impact: Mitigation Measure BIO-6 identifies that if suitable burrowing habitat is present, surveys and reporting will be conducted following Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012), but the DEIR later identifies that at a minimum, an initial take avoidance survey will be conducted no less than 14 days before stockpiling activities begin and a second survey shall be conducted within 24 hours before activities begin.

Why impact would occur: Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) identifies that four burrowing owl surveys should be conducted at different time periods.

Evidence impact would be significant: If burrowing owl protocol level surveys are not conducted during the appropriate time period, the Project can cause avoidable impacts to burrowing owl. In California, the burrowing owl breeding season extends from February 1 to August 31 (Haug et al. 1993, Thompsen 1971).

Recommended Potentially Feasible Mitigation Measure 7: To reduce impacts to less-than-significant, for Project activities that occur during the burrowing owl breeding season (February 1 to August 31) or non-breeding season (September 1 to January 31), a qualified biologist (that is knowledgeable about the burrowing owl, including its natural history, habitat requirements, seasonal movements and range, to survey and monitor for burrowing owls) shall conduct complete necessary burrowing owl habitat surveys, impact assessments, and prepare associated reports within all locations subject to Project activities. Methodology shall follow the recommendations and guidelines provided within the 2012 Staff Report on Burrowing owl Mitigation, available online here:

https://wildlife.ca.gov/Conservation/Survey-Protocols and as described below.

Burrowing owl surveys shall be conducted by the qualified biologist in accordance with the Staff Report on Burrowing Owl Mitigation (2012). As such, the qualified biologist shall conduct four survey visits: 1) at least one site visit between February 15 and April 15, and 2) a minimum of three survey visits, at least three weeks apart between April 15 and July 15, with at least one visit after June 15. If burrowing owls are identified during surveys, then DWR shall notify CDFW within three business days of determining that a burrowing owl is occupying the Project site to discuss the observed location, activities and behavior of the burrowing owl(s) and appropriate avoidance and minimization measures.

COMMENT 8: Section 3.3 Biological Resources; Special-Status Bats

Issue: The DEIR does not adequately minimize Project impacts to special-status bats: pallid bat (*Antrozous pallidus*) and western red bat (*Lasiurus blossevillii*).

Specific impact: Mitigation Measure BIO-7 identifies that a qualified biologist will conduct preconstruction surveys for special-status bats within 24 hours before construction; however, conducting bat surveys 24 hours before the start of construction may be insufficient to detect bats. Also, Mitigation Measure BIO-7 does not identify how special-status bats would be surveyed.

Why impact would occur: If special-status bat surveys are not conducted during the appropriate time period, the Project can cause avoidable impacts to special-status bats.

Evidence impact would be significant: If appropriate special-status bat surveys are not conducted during the appropriate time period, the Project can cause impacts to special-status bats that are avoidable.

Recommended Potentially Feasible Mitigation Measure 8: To reduce impacts to less-than-significant, all Project activities planned in potential special-status bat roosting habitat, the qualified biologist shall conduct a daytime and evening acoustic surveys in addition to extensive visual surveys for special-status bats and potential habitat for special-status bats at least 14 days prior to initiation of Project construction. If special-status bats are found on-site, the qualified biologist shall identify the species, estimated quantity present, roost type, and roost status, but shall avoid disturbing special-status bats during surveys. DWR or the qualified biologist shall notify CDFW within 24 hours if special-status bats are found during surveys. If special-status bats are found, the qualified biologist shall prepare a Special-Status Bat Mitigation and Monitoring Plan, which shall include: (1) an assessment of all Project impacts to special-status bats, including noise disturbance during maintenance activities; (2) effective avoidance and minimization measures to protect special-status bats; (3) compensatory mitigation for permanent impacts to maternity roosts if impacted.

MANDATORY FINDINGS OF SIGNIFICANCE Does the Project have potential to degrade quality of environment, substantially reduce habitat of a fish or wildlife species, cause fish or wildlife population to drop below self-sustaining levels?

COMMENT 9: Section 3.3 Biological Resources; Harmful Algal Blooms (HABs)

Issue: Cyanobacteria can degrade water quality by other means than just microcystin.

Specific impact: The DEIR identifies that cyanobacteria have the potential to degrade water quality as a result of the release of microcytsins in the water column; however, cyanobacteria can degrade water quality further than microcystin alone.

Why impact would occur: Cyanobacteria can have other impacts, such as outcompeting other phytoplankton. Some cyanobacteria have gas vesicles that allow them to remain at the surface, blocking light for other phytoplankton more nutritious for fish and other aquatic life.

Evidence impact would be significant: Cyanobacteria can degrade water quality further than just microcystin:

- Other cyanotoxins have been observed in the Delta such as anatoxin-a and saxitoxin (Lehman et al. 2021).
- In 2021, pH exceeded water quality objectives locally at Frank's Tract that is a cause of concern for ammonia toxicity to fish (Hartman et al. 2022).

Recommendation 3: Provide more sub information within the DEIR on the following claims:

Robert Trang 8 August 22, 2022 California Department of Water Resources

 In 2015, Kimmerer et al. 2019 found the drought barrier allowed submerged aquatic vegetation to spread in Frank's Tract. From this, it's possible it benefitted conditions for HABs where a large bloom occurred at Frank's Tract

Microcystin concentration related to LD50, the sample size needs to be acknowledged to indicate a very small sample size, due to no mandated toxin monitoring, so it's unclear on conditions, before, during, and afterwards. The sample taken was during August mid-bloom, when toxins tend to be more released during cooler conditions when the bloom subsides. Also, no fish tissues were collected only water quality samples, so it's not directly comparable to the Office of Environmental Health Hazard Assessment, 2009 Update of California Sport Fish Advisories https://oehha.ca.gov/media/downloads/advisories/discadvyupdates031309_11.pdf

COMMENT 10: Section 3.3 Biological Resources; Harmful Algal Blooms (HABs)

Issue: The Project may impact biological resources by elevating HABs.

Specific impact: The DEIR identifies that no clear patterns between presence and absence of the West False River drought barrier and elevated HABs. However, the Project may elevate HABs within Franks Tract.

Why impact would occur: During previous installations of the West False River drought barrier, researchers have found that the barrier could have elevated HABs within Franks Tract.

Evidence impact would be significant: Per Hartman et al. 2022, at a large spatial scope of the whole Delta the conclusion was that no clear patterns between presence and absence of the West False River drought barrier and elevated HABs; however, at a local scale it was possible the drought barrier elevated HABs at Frank's Tract.

Recommendation 4: CDFW recommends re-reviewing the findings in Hartman et al. 2022 and make appropriate edits within the DEIR.

III. Closely Related Past, Present, and Reasonably Foreseeable Probable Future Projects (CUMULATIVE IMPACTS, MANDATORY FINDING OF SIGNIFICANCE: Does the Project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that incremental effects of the Project are considerable when viewed in connection with effects of past projects, effects of other current projects, and effects of probable future projects?)

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

COMMENT 11: Section 5.1.1 Cumulative Context and Approach

Issue: The DEIR only evaluates cumulative impacts of the Project within the Project site and surrounding vicinity.

Specific impact: The Project hydraulically blocks the West False River to prevent saltwater intrusion from the San Francisco Bay into Franks Track. Other project that alters Delta hydrology should be assessed under cumulative impacts.

Why impact would occur: The Project in conjunction with other projects that effect stream hydrodynamics could significantly impact special-status species by altering stream flows, temperature, water quality, etc. that could negatively impact species-status species. For example, DWR's North Delta Drought Salinity Barriers is an option DWR is pursuing to that as the same objective as the Project, however, the Project is not identified within the DEIR as a cumulative impact project.

Robert Trang 9 August 22, 2022 California Department of Water Resources

Evidence impact would be significant: Cumulative effects associated with Delta hydrodynamics can impact special-status species by altering natural stream flow regimes, water temperature, water quality, etc.

Recommended Potentially Feasible Mitigation Measure 9: To reduce impacts to less-than-significant, the DEIR should analyze and mitigate for any cumulative impacts associated with all known projects that would alter Delta hydrodynamic and other drought related projects. Projects include but are not limited to DWR's North Drought Salinity Barriers Project, DWR's Delta Conveyance Project, and DWR's South Delta Temporary Barriers Project.

GENERAL COMMENTS

COMMENT 12: Since giant garter snake (*Thamnophis gigas* or *Thamnophis couchi gigas*) is a threatened species pursuant to CESA (Fish & G. Code, § 2050 et seq.), Mitigation Measure BIO-3 should be revised to include a CDFW-approved biologist conducting surveys for giant garter snake.

COMMENT 13: Recommend adding a section on the parameter pH in Section 3.5 Hydrology and Water Quality, as in 2021, when the West False River drought barrier was installed pH levels exceeded water quality standards at Frank's Tract.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://www.wildlife.ca.gov/Data/CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, & CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code section 2080.

Lake and Streambed Alteration Program

Notification is required for any activity that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute the final LSA Agreement until it has complied with CEQA (Public Resources Code § 21000 et seq.) as the responsible agency.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the DEIR to assist the DWR Division of Operations and Maintenance in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Monica Oey, Senior Environmental Scientist (Specialist), at (707) 428-2088 or Monica.Oey@wildlife.ca.gov; or Melissa Farinha, Environmental Program Manager, at Melissa.Farinha@wildlife.ca.gov.

ec

Office of Planning and Research, State Clearinghouse, Sacramento Erica Meyer, California Department of Fish and Wildlife – <u>Erica.Meyer@wildlife.ca.gov</u>

REFERENCES

- Bennett, W.A. (2005). Critical assessment of the Delta Smelt population in the San Francisco Estuary, California. San Francisco Estuary and Watershed Science, 3(2).
- Bloom, P. H. (1980). The status of the Swainson's hawk in California, 1979. Bureau of Land Management, Sacramento, CA, USA.
- California Department of Fish and Wildlife [CDFW] (2016). Status review: Swainson's hawk (*Buteo swainsoni*) in California. Report to the California Fish and Game Commission, Sacramento, CA, USA.
- Haug, E. A., B. A. Millsap, and M. S. Martell (1993). Burrowing owl (*Speotyto cunicularia*), in A. Poole and F. Gill, editors, The Birds of North America, The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C., USA.
- Hartman R, N. Rasmussen, D. Bosworth, M. Berg, T. Flynn, E. Ateljavich, B. Wolf, E. Britney, S. Lyster, S Khanna, and T. Pennington (2022). Report on the Impact of the Temporary Urgency Change Petition and Emergency Drought Barrier on Harmful Algal Blooms and Aquatic Weeds in the Delta. Sacramento (CA): California Department of Water Resources. 210 pp. + appendix. [Government Report.]
- Kimmerer W, F. Wikerson, B. Downing. R. Dugdale, E. Gross, K. Kayfetz, S. Khanna, A.E. parker, and J. Thompson (2019). Effects of drought and the emergency drought barrier on the ecosystem of the California Delta. San Francisco Estuary and Watershed, Vol. 17: Issue 3; Article 2.
- Lehman P, T. Kurobe, K. Huynh, S. Lesmeister, and S. J. The (2021). Covariance of phytoplankton, bacteria, and zooplankton communities within microsystis blooms in San Francisco Estuary. Frontiers in Microbiology, Vol. 12: Article 632264.
- Lewis, L. S., Denney, C., Willmes, M., Xieu, W., Fichman, R.A., Zhao, F., Hammock, B. G., Schultz, A., Fangue, N., Hobbs, J. A. (2021). Otolith-based approaches indicate strong effects of environmental variation on growth of a critically endangered estuarine fish. Marine Ecology Progress series, Vol. 676: 37-56.

California Department of Water Resources

- Lindley, S.T. (2004). Population structure of threatened and endangered Chinook Salmon ESUs in California's Central Valley basin. National Oceanic and Atmospheric Administration, Santa Cruz, CA. NOAA-TMNMFS-SWFSC-360.
- Marine, K. R., and J. J. Cech, Jr. (2004). Effects of high water temperature on growth, smoltification, and predator avoidance in juvenile Sacramento River chinook salmon. North American Journal of Fisheries Management 24:198–210.
- Martins, E. G., S. G. Hinch, D. A. Patterson, M. J. Hague, S. J. Cooke, K. M. Miller, M. F. Lapointe, K. K. English, and A. P. Farrell. 2011. Effects of river temperature and climate warming on stock-specific survival of adult migrating Fraser River sockeye salmon (*Oncorhynchus nerka*). Global Change Biology 17:99–114.
- Moore, M. K., and V. R. Townsend (1998). The interaction of temperature, dissolved oxygen and predation pressure in an aquatic predator-prey system. Oikos 81:329-336.
- Poletto, J. B., Cocherell, D. E., Baird, S. E., Nguyen, T. X., Cabrera-Stagno, V., Farrell, A. P., & Fangue, N. A. (2017). Unusual aerobic performance at high temperatures in juvenile Chinook salmon, *Oncorhynchus tshawytscha*. Conservation physiology, 5(1).
- Thomsen, L (1971). Behavior and ecology of burrowing owls on the Oakland Municipal Airport. Condor 73: 177-192.
- Selong, J. H., T. E. Mcmahon, A. V Zale, and F. T. Barrows (2001). Effect of temperature on growth and survival of bull trout, with application of an improved method for determining thermal tolerance in fishes. Tran 130:1026-1037.
- Young, Matthew J., Feyrer, Frederick V., Colombano, Denise D., Conrad, J. Louise, and Sih, Andrew (1998). Fish-habitat relationships along the estuarine gradient of the Sacramento-San Joaquin Delta, California: implications for habitat restoration, Estuaries and Coasts 41: 2389-2409.